MULTIPLE FUNCTION UNIT PROCESSOR USING DISTRIBUTED VARIABLE LENGTH INSTRUCTION WORDS

5

ABSTRACT

A multiprocessor data processing system for executing a program having branch instructions therein, each branch instruction specifying a target address in the program defining an instruction that is to be executed if that branch instruction causes the program to branch. The data processing system includes a plurality of processing sections having a function unit, a local memory, and a pointer. The local memory stores instruction sequences from the program that is to be executed by the function unit in that processing section. The pointer contains a value defining the next instruction in the local memory to be executed by the function unit. The pointers in each of the processing sections are reset to a new value determined by the target address of one of the branch instructions when a function unit branches in response to that branch instruction.

10

15